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PHOSPHORS CONTAINING OXIDES OF ALKALINE-EARTH AND GROUP-IIIB METALS AND LIGHT SOURCES INCORPORATING THE SAME

Abstract of Disclosure

Phosphors comprises oxides of at least an alkaline-earth metal selected from the group consisting of strontium, barium, calcium, and combinations thereof and at least a Group-IIIB metal selected from the group consisting of aluminum, gallium, indium, and combinations thereof activated with rare-earth metal ions comprising at least europium. The phosphors are characterized in that the ratio of positive ions and negative ions is off-stoichiometric. The phosphors are excitable efficiently in the near UV-to-blue light range. Blends containing at least one of these phosphors in conjunction with at least a light-emitting diode can provide light sources having a high luminosity and a high color-rendering index.

Figures